

Docket No. 30004771-1 US (1509-134) PATENTRECEIVED  
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of	
Inventors: Vijay MACHIRAJU et al.	: Confirmation No.: 6857
	:
U.S. Patent Application No. 09/715,045	: Group Art Unit: 2151
:	
Filed: November 20, 2000	: Examiner: Hassan A. PHILLIPS
:	
For: COOPERATIVE NETWORKING METHOD AND SYSTEM	

Mail Stop POBA  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**BRIEF ON APPEAL**

Further to the Notice of Appeal filed September 7, 2005, in connection with the above-identified application on appeal, herewith is Appellant's Brief on Appeal. The Commissioner is authorized to charge Deposit Account No. 08-2025 in the amount of \$500 for the statutory fee.

To the extent necessary, Appellant hereby requests any required extension of time under 37 C.F.R. §1.136 and hereby authorizes the Commissioner to charge any required fees not otherwise provided for to Deposit Account No. 08-2025.

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**TABLE OF AUTHORITIES**

None.

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**I. Real Party in Interest**

The real party in interest is Hewlett Packard Development Company, L.P., a Texas limited partnership.

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**II. Related Appeals and Interferences**

There are no related appeals and/or interferences.

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### III. Status of Claims

No claims are allowed. Claims 2, 8, 17, 18, 29, and 35-42 are cancelled. Claims 1, 3-7, 9-16, 20-28, 30-34 and 43-55 are rejected. Claims 14, 16 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Titmuss et al..

Claims 1, 21-24, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawley et al., (USP 5,995,503) in view of Titmuss et al. Claims 3-7, and 44-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawley, in view of Titmuss, and further in view of Morris et al. (U.S. Patent Publication 2003/0149794). Claims 9, 12, 13, 25, 30-34 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawley, in view of Masuoka. Claims 10, 11, 26-28, 49-53 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawley, in view of Masuoka, and further in view of Morris. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Titmuss in view of Crawley. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Titmuss, in view of Masuoka.

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**IV. Status of Amendments**

The after final amendment filed on September 7, 2005 has been entered. Appellants presume the amendment after final rejection, filed concurrently with the filing of the Appeal Brief, canceling claims 35-42 will be entered. The Claims Appendix and the presented arguments reflect the entry of the Amendment.



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#### V. Summary of Claimed Subject Matter

The claimed subject matter relates to a pico network including at least two network elements in the form of computers 12 and 14 (sometimes referred to as devices A and B in the specification and drawings), each of which includes a transmitter/receiver, in the form of mobile telephones (pages 6, lines 20-26; page 11, lines 1-3). Computers 12 and 14 are linked together by wide bandwidth, short range links 18 (page 6, lines 20-26). Computer 12 broadcasts, over the network, data indicating resources that computer 12 has available for sharing with other computers or devices in the network (Figure 2, step 50, page 7, lines 13-16). The shared resource is any one of: memory; storage capacity; network connections; and/or a connection to a public land mobile network (page 5, lines 6-10). Computer 14 requests the use of at least part of the available resources of computer 12 (step 52, page 7, lines 21-25). Computers 12 and 14 then negotiate a cost for the resources that computer 14 has requested (page 8, lines 1-11, steps 54 and 56). After the cost has been negotiated, a task is executed by computers 12 and 14 using the requested and negotiated resources of computer 12 and the resources of computer 14 (page 8, lines 13-17, step 58). The resources of computer 12 are released by computer 14, in response to a request by computer 14 after the task has been completed (page 8, lines 19 and 20, step 60).

The first and second network elements, in addition to being computers 12 and 14, can be any one of a personal digital assistant; a mobile telephone; a router; a server; a regenerative repeater; a multiplexer; or a codec (page 1, line 6-7). The computers can be PC's or laptops (page 5, lines 1-3). The resources to be shared include a memory, a network connection, processing power, a power source or a cheap connection (page 3, lines 2-22).

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**VI. Grounds of Rejection to be Reviewed on Appeal**

- A. The rejection of claims 14, 16 and 20 as being anticipated by Titmuss et al.
- B. The rejection of claims 1, 21-24, and 43 as being obvious as a result of Crawley et al., and Titmuss.
- C. The rejection of claims 3-7, and 44-48 as being obvious as a result of Crawley et al., Titmuss and Morris et al.
- D. The rejection of claims 9, 12, 13, 25, 30-34 and 54 as being obvious as a result of Crawley et al. and Masuoka.
- E. The rejection of claims 10, 11, 26, 49-53 and 55 as being obvious as a result of Titmuss, Crawley et al., Masuoka and Morris et al.
- F. The rejection of claim 15 as being obvious as a result of Titmuss and Crawley.
- G. The rejection of claim 19 as being obvious as a result of Titmuss, in view of Masuoka.

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## VII. Argument

- A. Claims 14, 16 and 20 are not anticipated by Titmuss et al., *inter alia*, because Titmuss et al. fails to disclose (1) a method of sharing network resources between first and second elements of a network, or (2) a fulfillment phase including co-operation between first and second network elements of sharable resources of the first network element by the second network element in accordance with an agreement made during a negotiation phase.

In rejecting claim 14, upon which claims 16 and 20 depend, item 14, page 7 of the Office Action relies on page 7, paragraphs 171-173 of Titmuss et al. However, the relied upon portion of Titmuss et al. fails to disclose anything about network resources being shared between first and second elements of a network, and does not indicate there is co-operation between first and second network elements of sharable resources of the first network element by the second network element. Instead, the relied on portion of Titmuss et al., as well as the remainder of Titmuss et al., is concerned with transmitting signals between a first network element and a second network element, such as workstations, personal computers and telephones, wherein bidding takes place with regard to the charges for transmitting the signal; page 1, paragraphs 6 and 12. Paragraphs 170-174 are concerned with a process of setting up a communication initiated by first party, wherein the first party gives an indication of the formatting it will transmit and receive when it transmits a message to a second party for whom a transmission or message signal is intended. Paragraphs 171-174 describe the operations performed by network managing agents 111-113, customer agents 101-106, and network resources agents 121-132 of Figure 11 in negotiating the cost of transmitting the message. There is nothing in the relied upon portion of Titmuss et al. disclosing the claimed requirement for cooperation between two network elements of sharable resources of a first element. The mere transmission of a message from one network element to another network element, with an

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agreement about the cost of the transmission, is not the same as co-operation between two network elements of sharable resources. In order for resources to be shared, it is necessary for the first network element to rely on a resource, such as a hardware or software resource or a connection, of the second network, to enable the first network element to perform a particular task. There is simply nothing in paragraphs 171-173 of Titmuss et al. to indicate such a sharing of resources occurs.

Claims 16 and 20 depend on claim 14 and are allowable therewith. In addition, the allegation in item 15, page 7 of the Office Action that paragraph 172 of Titmuss et al. discloses the claim 16 requirement for the negotiation phase to include the second network element requesting at least some sharable resources of the first network element is erroneous.

Paragraph 172 of Titmuss merely indicates that in the initiating the call, the customer agent for the user, i.e., one of agents 101-106 (Fig. 11), selects a proposal and a call is set up in accordance with the proposal. To set up the call, the network managing agent (i.e., one of agents 111-113 of Fig. 11), which has made the successful proposal negotiates with the resource agents (two or more of agents 121-132) within its region to provide the telecommunication service at a price within specified constraints. Each of the resource agents 121-132 in the particular region assesses whether it can offer a service in setting up the required service, and if so, submits a price. Hence, there is simply nothing in paragraph 172 of Titmuss that concerns the claim 16 requirement for a second network element to request at least some sharable resources of a first network element.

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- B. Crawley et al. and Titmuss et al. do not render claims 1, 21-24 or 43 obvious, *inter alia*, because (1) Crawley et al. does not disclose (a) broadcasting resources of a first network element available for sharing, (b) requesting the use of at least part of available resources of the first network element by a second network element, or (c) executing a task by co-operation of first and second network elements by using the requested resources of the first network element, and resources of the second network element, and (2) one of ordinary skill in the art would not have modified Crawley et al. to arrive at the requirements of these claims as a result of the cost negotiation disclosed by Titmuss.

To reject each of independent claims 1, 21-24 and 43, item 19, pages 8 and 9 of the final rejection erroneously relies on: (1) column 4, line 64 - column 5, line 7, of Crawley et al. to disclose broadcasting data including resources of a first network element available for sharing; (2) column 5, lines 27-30 to disclose requesting the use of at least part of available resources of the first network element by the second network element; and (3) column 5, lines 32-36 to disclose executing a task by co-operation of the first and second network elements by using the requested resources of the first element and resources of the second network element. The foregoing relied upon portions of Crawley et al. fail to mention anything about sharing resources between first and second network elements.

The relied upon portions of Crawley are concerned with determining whether a link between a pair of network nodes has an adequate quality of service (QoS) to provide the desired service between the pair of nodes, and is thus used to determine routing of a message. Column 4, line 63 - column 5, line 13 merely states the Link Resources Advertisements enable the nodes in the network to learn the available resources of the various links. One of the resources of the link is the available buffer or memory resources of a node. This does not mean the buffer or memory resources of the node are shared. As indicated in column 6, lines 39-43, the Resource Reservation Advertisement enables different routers at the different nodes to be aware of the resources and paths used by the data flow. Crawley et al. has no specific

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statement about the the buffer or memory resources being included in the Link Resource Advertisement. Column 5, lines 19-24 indicates each Resource Reservation Advertisement is broadcast to other nodes in the network so each node in the network can learn the resources already reserved by existing data flows. These existing reservations are considered when calculating or re-calculating the paths between the nodes. Column 5, lines 30-38 seems to imply the network resource information included in the advertisement is used to determine whether the requested calling service is available. If available, resources for the requested quality of service path are reserved for the data flow. Otherwise, the requested quality of service route cannot be established, and instead, a standard path is established to the destination. Column 5, lines 27-30 indicates the network paths are calculated in response to a quality of service request, and that the path calculations are based on information received in the advertisements. Column 5, lines 27-30 does not indicate that a second network element requests use of at least part of the available resources of a first network element. As previously discussed, there is nothing in column 5, lines 32-36 indicating a task is executed by first and second network elements co-operating by using the requested resources of the first network element and the resources of the second network element.

Since Crawley fails to disclose sharing, Crawley does not inherently release resources of a first network element by a second network element upon completion of the task.

Based on the foregoing, the rejection of claims 1, 21-24 and 43 is wrong because Crawley fails to disclose the foregoing elements of each of these claims.

The Final Rejection also fails to consider the requirement of claims 21, 22 and 24 for release of the resources of first network element to occur after completion of the task in response to a request by the second network element. The first full paragraph on page 9 of the

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Final Rejection states it is inherent that resources of the first network element are released by a second network element upon completion of a task, since reservation advertisements are broadcast over the network. The examiner's rationale is that if resources were never released upon completion of a task, there would be no need to broadcast resource reservations. However, this statement ignores the requirement of claims 21, 22 and 24 for the release to be in response to a request by the second network element. The Final Rejection ignores a similar limitation in claim 23, which says the second network element transmits, via the network to the first network element, release of the available resources of the first network element after completion of the task.

In addition, the rejection of claims 1, 21-24 and 43 is wrong because one of ordinary skill in the art would not have modified Crawley et al. to include the negotiating feature of Titmuss et al. As previously discussed, Titmuss et al. is not concerned with the sharing of resources. Instead, Titmuss et al. is concerned with negotiating the cost of a communication between two network elements. Since neither Titmuss et al. nor Crawley et al. is concerned with sharing resources, one of ordinary skill in the art would not have modified Crawley et al. to include the requirements of claims 1, 21-24 or 43 for negotiating the cost for the shared resources by the first and second network elements.

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- C. Dependent claims 3-7 and 44-48 are improperly rejected as being unpatentable over Crawley et al. in view of Titmuss et al., and further in view of Morris et al.

Claims 3-7 and 44-48 are allowable for the same reasons advanced for claims 1 and 43, upon which they respectively depend. Morris et al. does not cure the foregoing deficiencies in the rejections of claims 1 and 43.

In addition, one of ordinary skill in the art would not have modified the examiner's proposed combination of Crawley et al. in view of Titmuss et al. as a result of Morris et al. to provide a piconet or wide bandwidth, short-range wireless network, as required by claims 3, 6, and 44-48. Morris et al. is concerned with distributive management of an extended network including short-range wireless links employing Blue-tooth wireless communications protocol in a piconet. However, Morris et al. has nothing to do with sharing resources amongst network elements or negotiating cost. One of ordinary skill in the art would not have thought it necessary to use a cost negotiating arrangement in the Morris et al. Blue-tooth piconet arrangement because cost does not appear to be a factor in the Morris et al. arrangement. While Morris et al. discloses negotiation between nodes, the purpose of the negotiation is to determine master/slave status.

The reliance in item 25, page 13 of the Final Rejection on Crawley at column 4, line 64 – column 5, line 11 to disclose the requirements of claims 7, 38 and 42 for a shared resource to be a network connection or a memory element is incorrect. As discussed, supra, column 4, line 64 – column 5, line 11 merely indicates the Link Resource Advertisement contains information concerning the available resources of a particular node for making a transmission on the network. It does not indicate the buffer or memory resource is to be shared. Instead, as



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discussed earlier in part B of this Brief, the relied on portions of Crawley et al. indicate the available buffer or memory resources are used to determine quality of service routing.

- D. Claims 9, 12, 13, 25, 30-34 and 54 are patentable over Crawley et al., in view of Masuoka, *inter alia*, because Crawley does not disclose the requirements of independent claims 9, 25, 31-34 and 54, for (1) broadcasting data over a network by a first element, wherein the broadcast data indicate the resources of the first network element available for sharing, or (2) requesting the use of at least part of the available resources of a first network element by a second network element, or (3) executing a task by co-operation of first and second network elements.

To reject independent claims 9, 25, 31-34 and 54, the examiner again relies on (1) column 4, line 64 – column 5, line 11 of Crawley to disclose broadcasting with data by a first network element, wherein the data indicate the resources of the first network element available for sharing; (2) column 5, lines 27-30 for the disclosure of requesting the use at least part of available resources of the first network element by the second network element; and (3) column 5, lines 32-36 to disclose executing a task by co-operation of the first and second network elements. In other words, the examiner relies on the same rationale as appellants have shown to be incorrect in part B of this section of this Brief. Appellants will not reiterate this argument. Instead, reference is made to the foregoing portion B of the Brief that discusses independent claims 1, 21-24 and 43. Since Crawley et al. fails to disclose the foregoing features of independent claims 9, 25, 31-34 and 54, no further discussion of the rejection of these claims is necessary. The releasing features of claims 31 and 32, in response to a request by the second network element, or in response to a transmission by the second network element (as required by claim 33) is not inherent from the rationale advanced by the examiner; see the discussion in part B of this Brief concerning the similar limitations of claims 21, 22 and 24, as well as claim 23.

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The reliance on Crawley et al. to reject the features of claims 12, 13 and 30 is incorrect. While column 4, lines 40-44 of Crawley et al. indicates a network element is a router, nowhere does Crawley et al. state that a router is a shared resource. Similarly, there is nothing in column 4, line 64- column 5, line 11, of Crawley to indicate network connections and memory are resources to be shared.

- E. Titmuss et al. and Crawley do not render claim 15 obvious because Crawley does not disclose a first network element that broadcasts data over a network, wherein the data indicate the resources of the first network element available for sharing.

Item 36, page 18, of the Final Rejection relies on column 4, line 64 – column 5, line 11 of Crawley to disclose the requirement of dependent claim 15 of broadcasting data over a network by a first network element, wherein the resources of the first network element available for sharing are indicated. As discussed, *supra*, in connection with the rejection of claims 1, 21-24 and 43 in part B of this Brief, the relied upon portion of Crawley et al. does not indicate resources are available for sharing. Instead, Crawley broadcasts indications of resources of the first network element to determine quality of service and routing. Hence, claim 15 is improperly rejected on Titmuss in view of Crawley.

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F. Claims 10, 11, 26-28, 49-53 and 55 are patentable. Dependent claims 10, 11, 26-28, 49-53 and 55 are rejected as being unpatentable over Crawley in view of Masuoka, further in view of Morris. These dependent claims are allowable for the same reasons advanced for the independent claims on which they depend. Hence, claims 10 and 11 are allowable with claim 9; claims 26-28 are allowable with claim 25; claims 49, 50, 51, 52 and 53 are respectively allowable with claim 25, 31, 32, 33 and 34, and claim 55 is allowable with claim 54.

G. Claim 19 is dependent on claim 14, and is allowable for the same reasons advanced for claim 14.

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### VIII. Conclusion

The examiner improperly relies upon Titmuss et al. to reject independent claim 14, by alleging Titmuss discloses a negotiation phase including an agreement of a cost for the use of sharable resources of a first network element by a second element, wherein the negotiation phase includes an agreement for the cost for the use of sharable resources of the first network element by a second network element during a fulfillment phase that includes co-operation between the first and second network elements of the sharable resources of the first element in accordance with the agreement made during the negotiation phase. In fact, Titmuss does not disclose the alleged foregoing steps. Instead, Titmuss only negotiates the cost of transmitting a message between users.

The examiner incorrectly relies on Crawley et al., which is used as a primary reference with regard to all independent claims, except claim 14, to disclose broadcasting data over a network by a first network element, wherein the data broadcast by the network elements includes the resources of the first network element available for sharing; requesting the use of at least part of the available resources of the first network element by a second network element; and executing a task by co-operation of the first and second network elements by using the requested resources of the first network element and resources of the second network element. In Crawley et al., there is no disclosure of sharing and, therefore, no disclosure of the three foregoing requirements. In Crawley et al., the resources of the first network element are transmitted to enable network paths to be calculated, i.e., determined. The examiner also incorrectly relies on inherency concerning the release feature of claims 21-24 and 31-33,

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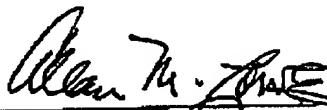
because he does not consider that the release of the first network element is in response to the second network element.

Based on the foregoing, reversal of the Final Rejection is in order.

Respectfully submitted,

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### **IX. Claims Appendix**

1. A telecommunication method using a network including at least two network elements; the method comprising the steps of:  
  
broadcasting data over the network by a first network element;  
  
including, within the data broadcast by the least two network elements, the resources of the first network element available for sharing;  
  
requesting the use of at least part of the available resources of the first network element by a second network element;  
  
negotiating a cost for the resources by the first and second network elements;  
  
after the cost has been negotiated, executing a task by co-operation of the first and second network elements by using the requested and negotiated resources of the first network element and resources of the second network element; and  
  
releasing the resources of the first network element by the second network element after completion of the task.
3. A method according to claim 1, wherein the network is in the form of a wide band short range wireless network.
4. A method according to claim 1, wherein at least one of the network elements in the form of a mobile device.

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5. A method according to claim 1, wherein the network includes geographically distributed wireless base stations.

6. A method according to claim 1, wherein the network is a piconet.

7. A method according to claim 1, wherein at least one of the following is the resource to be shared:

memory;

a network connection;

processing power;

power source; or

a cheap connection.

9. A network comprising first and second network elements, the first network element having broadcast means adapted to broadcast data indicative of resources of the first network element available for sharing, the second network element having communication means adapted to request at least some of said available resources, the first and second network elements being adapted to execute a task, co-operatively utilizing said resources, and to complete a task at the first network element by using resources at the second network element.

10. A network according to claim 9 wherein the network is a wireless network.

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11. A network according to claim 9 wherein the network is a wide bandwidth short range wireless network.

12. A network according to claim 9 wherein the first and second network elements includes, respectively, any one of:

a personal digital assistant;

a pc;

a laptop computer;

a mobile telephone;

a router;

a server;

a regenerative repeater;

a multiplexer; or

a codec.

13. A network according to claim 9 wherein the resource for sharing is any one of:

memory;

storage capacity;

network connections; or

a connection to a public land mobile network.



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14. A method of sharing network resources between first and second elements of a network, the method including:

performing a discovery phase;

performing a negotiation phase; and

performing a fulfillment phase,

the negotiation phase including an agreement of a cost for the use of sharable resources of the first network element by the second network element during the fulfillment phase, and

the fulfillment phase including co-operation between the first and second network elements of the sharable resources of the first element in accordance with the agreement made during the negotiation phase.

15. A method according to claim 14, wherein the discovery phase includes a first network element broadcasting a notification of its sharable resources over the network.

16. A method according to claim 14, wherein the negotiation phase includes the second network element requesting at least some sharable resources of the first network element.

19. A method according to claim 14 wherein the fulfillment phase includes execution of a task by the first network element and passing of a result of the task to the second network element.

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20. A method according to claim 14 wherein the fulfillment phase includes termination of communication between the first and second network elements.

21. A first network element for use in a telecommunication network including the first network element and a second network element arranged for (a) issuing requests to the first network element and (b) sending the requests to the first network element via the telecommunication network, the first network element comprising:

a transmitter/receiver for broadcasting and receiving data over the network; and

a processor arrangement connected to interact with the transmitter/receiver for (a) indicating, within the data, resources of the first network element available for sharing, (b) receiving a request by the second network element for use of at least part of the available resources of the first network element by the second network element, the use being to assist in performing a task of the second network element, (c) enabling the first network element to cooperate with the second network element to negotiate a cost for the resources, (d) using the resources in cooperation with resources of the second network element to assist in performing the task, the processor being arranged to use the resources after completion of the negotiation, and (e) releasing the resources of the first network element after completion of the task in response to a request by the second network element.

22. A method of operating a first network element of a telecommunication network including the first network element and a second network element arranged for (a) issuing requests to the first network element and (b) sending the requests to the first network element

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via the telecommunication network, the operating method of the first network element comprising:

broadcasting data over the network;

including, within the data broadcast by the first network element, the resources of the first network element available for sharing;

receiving a request, via the network, by the second network element, the use being to assist in performing a task of the second network element, for use of at least part of the available resources of the first network element by the second network element;

negotiating a cost for the resources by cooperating with the second network element;

using the resources in cooperation with resources of the second network element to assist in performing the task, the processor being arranged to use the resources after completion of the negotiation, and

releasing the resources of the first network element after completion of the task in response to a request received by the first network element, via the network, as transmitted by the second network element.

23. A second network element for use in a telecommunication network including a first network element and the second network element, the first network element being arranged for (a) broadcasting data over the network, (b) indicating, within the data, resources of the first network element available for sharing, (c) releasing the resources of the first network element upon completion of the task in response to a request by the second network element, the second network element comprising:

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a transmitter/receiver for broadcasting and receiving data over the network; and

a processor arrangement connected to interact with the transmitter/receiver for (a) causing transmission via the network to the first network element of a request for the use of at least part of the available resources of the first network element, (b) causing the second network element to cooperate with the first network element to negotiate a cost for the available resources, (c) causing co-operation of a resource of the second network element with the available resources of the first network element, the co-operation causing the performance of a task of the second network element, the co-operation occurring after the completion of the negotiation, and (d) causing transmission via the network to the first network element for release of the available resources of the first network element after completion of the task.

24. A method of operating a second network element of a telecommunication network including a first network element and the second network element, the first network element being arranged for (a) broadcasting data over the network, (b) indicating, within the data, resources of the first network element available for sharing, and (c) releasing the resources of the first network element upon completion of the task in response to a request by the second network element, the method of operating the second network element comprising:

sending, via the network, to the first network element a request for use of at least part of the available resources of the first network element;

negotiating a cost for the resources by cooperating with the first network element;

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causing co-operation of a resource of the second network element with the available resources of the first network element, the co-operation causing the performance of a task of the second network element, the co-operation occurring after the completion of the negotiation; and

sending, via the network, to the first network element a release of the resources of the first network element after completion of the task.

25. A telecommunication method using a network including at least two network elements; the method comprising the steps of:

broadcasting data over the network by a first network element;

including, within the data broadcast by the first network element, the resources of the first network element available for sharing;

requesting the use of at least part of the available resources of the first network element by a second network element;

executing a task by co-operation of the first and second network elements;

releasing the resources of the first network element by the second network element upon completion of the task; and

completing the task at the first network element by using resources at the second network element.

26. A method according to claim 25, wherein the network is a wide band short range wireless network.

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27. A method according to claim 25, wherein at least one of the network elements is a mobile device.

28. A method according to claim 25, wherein the network includes geographically distributed wireless base stations.

30. A method according to claim 25, wherein at least one of the following is the resource to be shared:

memory;

a network connection;

processing power;

power source; or

a cheap connection.

31. A first network element for use in a telecommunication network including the first network element and a second network element arranged for (a) issuing requests to the first network element and (b) sending the requests to the first network element via the telecommunication network, the first network element comprising:

a transmitter/receiver for broadcasting and receiving data over the network; and

a processor arrangement connected to interact with the transmitter/receiver for (a) indicating, within the data broadcast by the transmitter/receiver, resources of the first network element available for sharing, (b) receiving a request by the second network element for use of at least part of the

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available resources of the first network element by the second network element, (c) causing the first network element to cooperate with the second network element to execute a task, (d) releasing the resources of the first network element upon completion of the task in response to a request by the second network element, and (e) completing the task at the first network element by using resources at the second network element.

32. A method of operating a first network element of a telecommunication network including the first network element and a second network element arranged for (a) issuing requests to the first network element and (b) sending the requests to the first network element via the telecommunication network, the operating method of the first network element comprising:

broadcasting data over the network;

including, within the data broadcast by the first network element, the resources of the first network element available for sharing;

receiving a request, via the network, by the second network element for use of at least part of the available resources of the first network element by the second network element;

executing a task by cooperating with the second network element;

releasing the resources of the first network element after completion of the task in response to a request received by the first network element, via the network, as transmitted by the second network element; and

completing the task at the first network element by using resources at the second network element.

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33. A second network element for use in a telecommunication network including a first network element and the second network element, the first network element being arranged for (a) broadcasting data over the network, (b) indicating, within the data broadcast by the first network element, resources of the first network element available for sharing, (c) releasing the resources of the first network element upon completion of the task in response to a request by the second network element, the second network element comprising:

a transmitter/receiver for broadcasting and receiving data over the network; and

a processor arrangement connected to interact with the transmitter/receiver for (a) causing transmission via the network to the first network element of a request for the use of at least part of the available resources of the first network element, (b) causing the second network element to cooperate with the first network element to execute a task, (c) causing transmission via the network to the first network element for release of the resources of the first network element after completion of the task, and (d) causing resources at the second network element to be used for completing the task at the first network element.

34. A method of operating a second network element of a telecommunication network including the first network element and the second network element, the first network element being arranged for (a) broadcasting data over the network, (b) indicating, within the data resources of the first network element available for sharing, (c) co-operating with the second network element to complete a task of the second network element, and (d) releasing the resources of the first network element upon completion of the task in response to a request by the second network element, the method of operating the second network element comprising:



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sending, via the network, to the first network element a request for the use of at least part of the available resources of the first network element;

cooperating with the first network element so the task is completed at the first network element by using resources at the second network element; and

sending, via the network, to the first network element a release of the resources of the first network element after completion of the task.

43. A network comprising at least first and second network nodes, the first network node including a first transmitter/receiver arrangement for (a) broadcasting to other network nodes of the network data indicative of resources of the first network node available for sharing to assist in performing tasks of the other network nodes, and (b) receiving signals from the other network nodes, the second network node having a second transmitter/receiver arrangement for (a) broadcasting to further network nodes of the network a request for shared resources available from the further network nodes to assist in performing a task of the second network node and (b) receiving from the first network node the broadcast data indicative of the first network node available for sharing, the first and second network nodes being arranged for causing the first and second transmitter/receiver arrangements to exchange signals (a) concerned with negotiating a cost to the second network node of resources of the first network node available for sharing to assist in performing the task of the second network node and (b) for thereafter enabling the resources of the first network node available for sharing to be used cooperatively with resources of the second network node to assist in performing the task of the second network node.

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44. The network of claim 43 wherein the network is a piconet and the first and second transmitter/receiver arrangements are adapted for use with the piconet.

45. The network element of claim 21 wherein the network is a piconet and the transmitter/receiver is adapted for use with the piconet.

46. The method of claim 22 wherein the network is a piconet and the data are transmitted from the first network element and the request is received by the first network element by a transmitter/receiver arrangement adapted for use with the piconet.

47. The network element of claim 23 wherein the network is a piconet and the data are transmitted from the first network element and received by the first network element by a transmitter/receiver arrangement adapted for use with the piconet.

48. The method of claim 24 wherein the network is a piconet and the request and release are sent from the second network element by a transmitter/receiver arrangement adapted for use with the piconet and the co-operation by the second network element is achieved by the transmitter/receiver arrangement adapted for use with the piconet.

49. The method of claim 25 wherein the network is a piconet and the data are transmitted from the first network element by a first transmitter/receiver arrangement of the first network element adapted for use with the piconet, and the request and release are transmitted from the second network element by a second transmitter/receiver arrangement of the second network element adapted for use with the piconet, the first and second

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transmitter/receiver arrangements exchanging signals causing the task to be executed by co-operation of the first and second network elements.

50. The network element of claim 31 wherein the network is a piconet and the transmitter/receiver is adapted for use with the piconet.

51. The method of claim 32 wherein the network is a piconet and the data are transmitted from the first network element and the request is received at the first network element by a transmitter/receiver arrangement adapted for use with the piconet.

52. The network element of claim 33 wherein the network is a piconet and the transmitter/receiver is adapted for use with the piconet.

53. The method of claim 34 wherein the network is a piconet and the request and release are sent from the second network element by a transmitter/receiver arrangement adapted for use with the piconet and the task is completed at the first network element as a result of cooperation between the first and second network elements via signals coupled through the transmitter/receiver arrangement adapted for use with the piconet.

54. A network comprising at least first and second network nodes, the first network node including a first transmitter/receiver arrangement for (a) broadcasting to other network nodes of the network data indicative of resources of the first network node available for sharing to assist in performing tasks of the other network nodes, and (b) receiving signals from the other network nodes, the second network node having a second transmitter/receiver arrangement for (a) broadcasting to further network nodes of the network a request for shared

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resources available from the further network nodes to assist in performing a task of the second network node and (b) receiving from the first network node the broadcast data indicative of the first network node available for sharing, the first and second network nodes being arranged for causing the first and second transmitter/receiver arrangements to exchange signals for enabling the resources of the first network node available for sharing to be used cooperatively with resources of the second network node such that the first network node completes the task of the second network node.

55. The network of claim 54 wherein the network is a piconet and the first and second transmitter/receiver arrangements are adapted for use with the piconet.

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**X. Evidence Appendix**

None.

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**XI. Related Proceedings Appendix**

None.

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